Attorney Docket No. 9314-45 PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: William O. Camp, Jr. Confirmation No.: 4546
Application No.: 10/626,224 Examiner: Eugene Yun
Filed: July 24, 2003 Group Art Unit: 2618
For: WIRELESS TERMINALS AND METHODS FOR COMMUNICATING OVER CELLULAR AND ENHANCED MODE BLUETOOTH COMMUNICATION LINKS

September 11, 2008

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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed on June 19, 2008 and the "Notice of Panel Decision from Pre-Appeal Brief Review" mailed August 14, 2008.

REAL PARTY IN INTEREST

The real party in interest is assignee Sony Ericsson Mobile Communications AB by assignment recorded July 24, 2003 at Reel 014343, Frame 0434.

RELATED APPEALS AND INTERFERENCES

Appellant is aware of no appeals or interferences that would be affected by the present appeal.

STATUS OF CLAIMS

Claims 1-3, 7-10, 12-16, 19-22, and 27-29 are pending in the present application as of the filing date of this Brief.

STATUS OF AMENDMENTS

Amendments filed 25 September 2006, 5 January 2007, and 21 December 2007 have been entered. No amendments have been filed after the Final Office Action of 26 March

2008. The attached Claims Appendix presents the pending claims and the corresponding status of each of the pending claims.

SUMMARY OF CLAIMED SUBJECT MATTER

The present application includes independent Claims 1, 3, 9, 10, 15, 21, and 22.

Some embodiments of the present invention according to independent Claim 1 are directed to a wireless terminal 100 that includes a short-range communication module 110, a cellular transceiver 108, and a processor 106 (see Figure 1). The short-range communication module 110 is configured to communicate first information over a short-range wireless interface with a communication device 104. (Figure 1 and Specification, page 3, lines 14-18) The cellular transceiver 108 is configured to communicate second information with a cellular network 102 according to a cellular communication protocol. (Specification, page 3, lines 19-33) The processor 106 is configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver 108 according to a signal processing operation, and is configured to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module 110 using the signal processing operation based on whether the communication device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27).

Some embodiments of the present invention according to independent Claim 3 are directed to a wireless terminal that includes a Bluetooth module 110, a cellular transceiver 108, and a processor 106 (see Figure 1). The Bluetooth module 110 is configured to communicate first information with a remote Bluetooth device 104. (Figure 1 and Specification, page 3, lines 14-18) The cellular transceiver 108 is configured to communicate second information with a cellular network 102 according to a cellular communication protocol. (Specification, page 3, lines 19-33) The processor 106 is configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver 108, and to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the Bluetooth module 110 based on whether the remote

Bluetooth device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27).

Some embodiments of the present invention according to independent Claim 9 are directed to the wireless terminal includes a Bluetooth module 110, a cellular transceiver 108, and a processor 106. (see Figure 1). The Bluetooth module 110 is configured to communicate first information with a remote Bluetooth device 104. The cellular transceiver 108 is configured to communicate second information with a cellular network 102 according to a cellular communication protocol. The processor 106 is configured to convolutionally encode (Figure 3, block 300) the second information for transmission by the cellular transceiver according to a signal processing operation, and to selectively convolutionally encode the first information according to the signal processing operation for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27).

Some embodiments of the present invention according to independent Claim 10 are directed to a wireless terminal 100 that includes a Bluetooth module 110, a cellular transceiver 108, and a processor 106. (See Figure 1) The Bluetooth module 110 is configured to communicate first information with a remote Bluetooth device 104. The cellular transceiver 108 is configured to communicate second information with a cellular network 102 according to a cellular communication protocol. The processor 106 is configured to interleave (Figure 3, block 308) the second information over time for transmission by the cellular transceiver 108 according to a signal processing operation, and to selectively interleave the first information over time according to the signal processing operation for communication by the Bluetooth module 110 based on whether the remote Bluetooth device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27).

Some embodiments of the present invention according to independent Claim 15 are directed to a method of operating wireless terminal 100. A determination is made as to whether a remote Bluetooth device 104 supports an enhanced communication mode. Voice in first information is selectively encoded as using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec according to a signal processing operation for communication to the remote Bluetooth device 104 based on whether the

remote Bluetooth device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27). The first information is communicated to the remote Bluetooth device 104.

Some embodiments of the present invention according to independent Claim 21 are directed to a method of operating wireless terminal 100. A determination is made as to whether a remote Bluetooth device 104 supports an enhanced communication mode. First information is selectively convolutionally coded for communication to the remote Bluetooth device based on whether the remote Bluetooth device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27). The first information is communicated to the remote Bluetooth device 104.

Some embodiments of the present invention according to independent Claim 22 are directed to a method of operating a wireless terminal 100. A determination is made as to whether a remote Bluetooth device 104 supports an enhanced communication mode. First information is selectively interleaved over time for communication to the remote Bluetooth device 104 based on whether the remote Bluetooth device 104 supports an enhanced communication mode. (Specification, page 5, line 20-page 6 line 17, and page 6 line 18-page 7 line 27). The first information is communicated to the remote Bluetooth device 104.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Is Claim 1 properly rejected under 35 U.S.C. §103 (a) as unpatentable over PCT Published Application No. WO 00/74350 to Rasmusson et al. (Rasmusson) in view of U.S. Pat. No. 7,023,880 to El-Maleh et al. (El-Maleh)?

2. Is Claim 3 properly rejected under 35 U.S.C. §103 (a) as unpatentable over Rasmusson in view of El-Maleh?

3. Are Claims 9 and 21 properly rejected under 35 U.S.C. §103 (a) as unpatentable over Rasmusson in view of El-Maleh?

4. Are Claims 10 and 22 properly rejected under 35 U.S.C. §103 (a) as unpatentable over Rasmusson in view of El-Maleh?

5. Is Claim 15 properly rejected under 35 U.S.C. §103 (a) as unpatentable over Rasmusson in view of El-Maleh?

ARGUMENT

I. Introduction

All pending claims, Claims 1-3, 7-10, 12-16, 19-22, and 27-29, stand rejected as allegedly obvious. Obviousness under 35 U.S.C. § 103 is a question of law, the resolution of which is based on the following factual inquiries: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations, including evidence of commercial success, long-felt but unsolved needs, failure of others, and unexpected results. MPEP § 2141; *Graham v. John Deere Co.*, 383 U.S. 1 (1966). All words in a claim must be considered in judging the patentability of that claim against the prior art. MPEP § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. MPEP § 2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Mere conclusory statements are insufficient to support a rejection for obviousness; rather, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Intern. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The Supreme Court in *KSR* observed that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR*, 127 S.Ct. at 1741. As such, the Court noted that it was "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed, and, for that reason, the analysis regarding whether such reason existed "should be made explicit." KSR, 127 S.Ct. at 1731. A corollary principle is that, when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be unobvious. Id. at 1740.

Appellant respectfully submits that the pending claims are patentable over the cited references because the cited references, alone and in combination, fail to disclose or suggest the recitations of the pending claims.

II. Claims 1-3, 7-10, 12-16, 19-22, and 27-29 are Patentable

1. Independent Claim 1 is Patentable over Rasmusson in view of El-Maleh

Claim 1 recites (paragraph 1 and 2 numbering and emphasis added):

1. A wireless terminal, comprising:

a short-range communication module that is configured to communicate first information over a short-range wireless interface with a communication device;

a cellular transceiver that is configured to communicate second information with a cellular network according to a cellular communication protocol; and

a processor that is configured to

(1) encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver according to a signal processing operation, and

(2) is *configured to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation based on whether the communication device supports an enhanced communication mode*.

A. Clear Error in Final Office Action's Construction of Claim 1 term "short-range communication module":

In an attempt to read Claim 1 onto El-Maleh, the Final Office Action erroneously construes the term "short-range communication module" of Claim 1 in a way that is both contrary what is claimed and what is taught in the specification in order to attempt to read that term onto El-Maleh's description of cellular systems (CDMA, UMTS, or GSM) that use EFR/AMR voice encoding. The Final Office Action's only basis for such construction of this claim term is that the "the claim does not state how short the range is." (Final Office Action, page 11).

However, Claim 1 defines that the wireless terminal of Claim 1 has a "short-range communication module" structural element that is different than a "cellular transceiver" structural element. Claim 1 further recites that the processor carries out a different function for the "cellular transceiver" relative to that carried out for the "short-range communication module." In particular, Claim 1 recites that the processor: 1) encodes voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec *for transmission by the cellular transceiver* according to a signal processing operation, and 2) selectively encodes voice in the first information using at least one of the EFR codec and the AMR codec *for communication by the short-range communication module* using the signal processing operation based on whether the communication device supports an enhanced communication mode. Moreover, the

specification explains and shows in Figure 1 that the short-range communication module (e.g., Bluetooth module 110) communicates over a short range communication link 138 directly with a short range communication device (e.g., Bluetooth cordless telephone 104). In sharp contrast, the cellular transceiver 108 communicates indirectly with another communication device through long range communication link 130 and a cellular network 102. Although two cellular phones may be located proximately to one another, they cannot communicate through a short-range communication link with each other, but instead must communicate indirectly with each other through the long range communication link 130 and the cellular network 102.

Consequently, the Examiner's attempt to construe the structural element "short-range communication module" to be one and the same as the structural element "cellular transceiver," so as to attempt to read both onto El-Maleh's cellular system, is clearly contrary to many express recitations of Claim 1 and what is taught in the specification and, therefore, is improper under the law. Therefore, Appellant submits that it is clear error for the Final Office Action to construe Maleh's description of a cellular system as reading on the functionality recited in Claim 1 for the structural element of a "short-range communication module."

Appellant submits that in neither the sections cited by the Final Office Action nor elsewhere does El-Maleh or Rasmusson, or the combination thereof, describe or suggest that a EFR codec or an AMR codec is used to encode voice for communication by a "short-range communication module."

B. Clear Error in Final Office Action's Understanding of El-Maleh's Teachings:

Claim 1 recites, *inter alia*, that the processor is configured to *selectively encode voice* in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation *based on whether the communication device supports an enhanced communication mode*.

The Final Office Action erroneously contends that these recitations of Claim 1 read on El-Maleh's col. 8, line 62 to col. 9, line 21 and, in particular, col. 9, lines 10-15 (in bold and underlined below):

> ... Some examples of modulation schemes used within communication systems are the Quadrature Phase Shift Keying scheme (QPSK), 8-ary Phase Shift Keying scheme (8-PSK), and 16-ary Quadrature Amplitude Modulation (16-QAM). **Some of the various encoding schemes that can be selectively implemented are convolutional encoding schemes, which are implemented at various rates, or turbo coding, which comprises multiple encoding steps separated by interleaving steps.** ... (El-Maleh, portion of col. 8, line 62 to col. 9, line 21, emphasis added).

When read in the proper context, it is clear that El-Maleh's use of the term "selectively implemented" refers to that the cellular system may be implemented using one or more "convolutional encoding schemes, which are implemented at various rates, or turbo coding, which comprises multiple encoding steps separated by interleaving steps." This understanding is consistent with El-Maleh prior sentence which similarly says that the modulation schemes that can be used within its cellular systems "are the Quadrature Phase Shift Keying scheme (QPSK), 8-ary Phase Shift Keying scheme (8-PSK), and 16-ary Quadrature Amplitude Modulation (16-QAM)."

Consequently, in neither the cited section nor elsewhere does El-Maleh teach or suggest that a processor *selectively encodes voice* in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation (which is also used to encode voice in second information for transmission by a cellular transceiver) *based on whether the communication device supports an enhanced communication mode*.

The Final Office Action therefore has not established a *prima facie* case of obviousness because Rasmusson and El-Maleh do not teach or suggest all the recitations of Claim 1. M.P.E.P. §2143. Consequently, Claim 1 is patentable over Rasmusson in view of El-Maleh.

2. Independent Claim 3 is Patentable over Rasmusson in view of El-Maleh

Independent Claim 3 recites, *inter alia*, "a processor that is configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver, and to *selectively encode voice* in the first information using at least one of the EFR codec and the AMR codec for communication by the Bluetooth module *based on whether the remote Bluetooth device supports an enhanced communication mode.*" The Final Office Action concedes on page 4 that these recitations are not taught by Rasmusson. However, El-Maleh

also does not describe or suggest that a EFR codec or an AMR codec is used to encode voice for communication by a "Bluetooth module" and, moreover, as explained above for Claim 1, does not describe or suggest that a mobile communication terminal *selectively encodes voice* in first information using at least one of the EFR codec and the AMR codec for communication by the Bluetooth module *based on whether the remote Bluetooth device supports an enhanced communication mode*.

The Final Office Action therefore has not established a *prima facie* case of obviousness because Rasmusson and El-Maleh do not teach or suggest all the recitations of Claim 3. M.P.E.P. §2143. Consequently, Claim 3 is patentable over Rasmusson in view of El-Maleh.

3. Independent Claims 9 and 21 are Patentable over Rasmusson in view of El-Maleh

Independent Claim 9 recites, *inter alia*, "a processor that is configured to convolutionally encode the second information for transmission by the cellular transceiver according to a signal processing operation, and to *selectively convolutionally* encode the first information according to the signal processing operation *for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.*" The Final Office Action concedes on pages 6 and 7 that these recitations are not taught by Rasmusson. However, the Office Action contends that these recitations are taught by El-Maleh's col. 9, lines 6-21, a portion of which is repeated below (emphasis added):

> Some examples of modulation schemes used within communication systems are the Quadrature Phase Shift Keying scheme (QPSK), 8-ary Phase Shift Keying scheme (8-PSK), and 16-ary Quadrature Amplitude Modulation (16-QAM). Some of the various encoding schemes that can be *selectively implemented* are *convolutional encoding schemes*, which are implemented at various rates, or turbo coding, which comprises multiple encoding steps separated by interleaving steps. ...

Although El-Maleh describes that a cellular system may use a "convolutional encoding scheme," in neither the cited section nor elsewhere does El-Maleh describe or suggest that convolutional coding is used to encode voice for communication by a "Bluetooth module" and, moreover, as explained above, it does not describe or suggest that a mobile communication terminal *selectively convolutionally* encodes the first information according

to the signal processing operation *for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode*.

Independent Claim 21 is a method that corresponds to the wireless terminal of Claim 9.

The Final Office Action therefore has not established a *prima facie* case of obviousness of Claims 9 and 21 because Rasmusson and El-Maleh do not teach or suggest all the recitations of Claims 9 and 21. M.P.E.P. §2143. Consequently, Claims 9 and 21 are patentable over Rasmusson in view of El-Maleh.

4. Independent Claims 10 and 22 are Patentable over Rasmusson in view of El-Maleh

Independent Claim 10 recites, *inter alia*, "a processor that is configured to interleave the second information over time for transmission by the cellular transceiver according to a signal processing operation, and to *selectively interleave* the first information over time according to the signal processing operation *for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.*", The Final Office Action concedes on pages 7 and 8 that these recitations are not taught by Rasmusson. The Final Office Action on page 8 then contends that these recitations are taught by El-Maleh's col. 7, lines 53-67, which describes that in a cellular system "bits are ... interleaved." However, in neither the cited section nor elsewhere does El-Maleh describe or suggest that information is interleaved over time for communication by a "Bluetooth module" and, moreover, does not describe or suggest that a mobile communication terminal *selectively convolutionally* encodes as recited in Claim 10.

Independent Claim 22 is a method that corresponds to the wireless terminal of Claim 10.

The Final Office Action therefore has not established a *prima facie* case of obviousness of Claims 10 and 22 because Rasmusson and El-Maleh do not teach or suggest all the recitations of Claims 10 and 22. M.P.E.P. §2143. Consequently, Claims 10 and 22 are patentable over Rasmusson in view of El-Maleh.

5. Independent Claim 15 is Patentable over Rasmusson in view of El-Maleh

Independent Claim 15 recites a method of operating the wireless terminal that includes "determining whether a remote Bluetooth device supports an enhanced communication mode." The Office Action contends that this recitation is taught by Rasmusson's page 14, line 30 to page 15, line 10. However, the cited section of Rasmusson contains no description nor suggestion that any determination is made as to whether a remote Bluetooth device supports an enhanced communication mode. The method of Claim 15 further recites "*selectively encoding* voice in first information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec according to a signal processing operation for communication to the remote Bluetooth device *based on whether the remote Bluetooth device supports an enhanced communication mode*". Appellant submits that Rasmusson and El-Maleh are devoid of any description or suggestion of these recitations of Claim 15.

The Final Office Action therefore has not established a *prima facie* case of obviousness of Claim 15 because Rasmusson and El-Maleh do not teach or suggest all the recitations of Claim 15. M.P.E.P. §2143. Consequently, Claim 15 is patentable over Rasmusson in view of El-Maleh.

6. The Dependent claims are Patentable over Rasmusson in view of El-Maleh

The dependent claims are patentable at least pursuant to the patentability of the independent bases claims from which they depend.

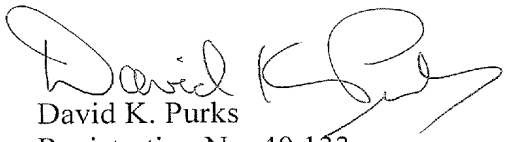
CONCLUSION

In light of the above discussion, Appellant submits that the pending claims are directed to patentable subject matter and, therefore, requests reversal of the rejections of those claims and passing of the application to issue.

It is not believed that an extension of time and/or additional fee(s) are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional

fees believed to be due in connection with this paper may be charged to Deposit Account No. 50-0220.

Respectfully submitted,



David K. Purks
Registration No. 40,133
Attorney for Appellant

Customer Number 54414
Myers Bigel Sibley & Sajovec, P.A.
P.O. Box 37428
Raleigh, NC 27627
919-854-1400
919-854-1401 (Fax)

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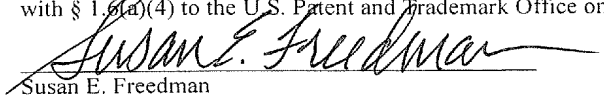

Susan E. Freedman
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CLAIMS APPENDIX

1. (Previously Presented) A wireless terminal, comprising:

a short-range communication module that is configured to communicate first information over a short-range wireless interface with a communication device;

a cellular transceiver that is configured to communicate second information with a cellular network according to a cellular communication protocol; and

a processor that is configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver according to a signal processing operation, and is configured to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the short-range communication module using the signal processing operation based on whether the communication device supports an enhanced communication mode.

2. (Original) The wireless terminal of Claim 1, wherein the short-range communication module is configured to communicate the first information according to a Bluetooth communication protocol.

3. (Previously Presented) A wireless terminal, comprising:

a Bluetooth module that is configured to communicate first information with a remote Bluetooth device;

a cellular transceiver that is configured to communicate second information with a cellular network according to a cellular communication protocol; and

a processor that is configured to encode voice in the second information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec for transmission by the cellular transceiver, and to selectively encode voice in the first information using at least one of the EFR codec and the AMR codec for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

4.-6. (Canceled)

7. (Previously Presented) The wireless terminal of Claim 3, wherein the first information comprises audio information, and wherein the processor is further configured to cancel echo in the audio information for communication by the Bluetooth communication module using a same signal processing operation that is used to cancel echo in audio information in the second information communicated by the cellular transceiver in response to the remote Bluetooth device supporting an enhanced communication mode.

8. (Previously Presented) The wireless terminal of Claim 3, wherein the first information comprises audio information, and wherein the processor is further configured to reduce noise in the audio information for communication by the Bluetooth communication module using a same signal processing operation that is used to cancel echo in audio information in the second information communicated by the cellular transceiver in response to the remote Bluetooth device supporting an enhanced communication mode.

9. (Previously Presented) A wireless terminal, comprising:

a Bluetooth module that is configured to communicate first information with a remote Bluetooth device;

a cellular transceiver that is configured to communicate second information with a cellular network according to a cellular communication protocol; and

a processor that is configured to convolutionally encode the second information for transmission by the cellular transceiver according to a signal processing operation, and to selectively convolutionally encode the first information according to the signal processing operation for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

10. (Previously Presented) A wireless terminal, comprising:

a Bluetooth module that is configured to communicate first information with a remote Bluetooth device;

a cellular transceiver that is configured to communicate second information with a cellular network according to a cellular communication protocol; and

a processor that is configured to interleave the second information over time for transmission by the cellular transceiver according to a signal processing operation, and to selectively interleave the first information over time according to the signal processing operation for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

11. (Canceled)

12. (Original) The wireless terminal of Claim 3 wherein the remote Bluetooth device comprises a cordless telephone base station that is configured to be connected to a public switched telephone network (PSTN), and wherein the processor is configured to communicate through the Bluetooth module with the cordless telephone base station.

13. (Previously Presented) The wireless terminal of Claim 12, wherein the processor is configured to selectively embed control data in the first information based on whether the remote Bluetooth device supports an enhanced communication mode, and wherein the control data comprises a command to control operation of the cordless telephone base station.

14. (Original) The wireless terminal of Claim 13, wherein the control data instructs the cordless telephone base station to terminate a call on the PSTN.

15. (Previously Presented) A method of operating a wireless terminal, comprising:

determining whether a remote Bluetooth device supports an enhanced communication mode;

selectively encoding voice in first information using at least one of an Enhanced Full Rate (EFR) codec and an Adaptive Multi-Rate (AMR) codec according to a signal processing operation for communication to the remote Bluetooth device based on whether the remote Bluetooth device supports an enhanced communication mode; and

communicating the first information to the remote Bluetooth device.

16. (Previously Presented) The method of Claim 15, further comprising:

encoding voice in second information using at least one of the EFR codec and the AMR codec according to the signal processing operation for transmission to a cellular network.

17.-18. (Canceled)

19. (Previously Presented) The method of Claim 16, wherein the first information comprises audio information, and further comprising canceling echo in the audio information.

20. (Previously Presented) The method of Claim 16, wherein the first information comprises audio information, and further comprising reducing noise in the audio information.

21. (Previously Presented) A method of operating a wireless terminal, comprising:

determining whether a remote Bluetooth device supports an enhanced communication mode;

selectively convolutionally coding first information for communication to the remote Bluetooth device based on whether the remote Bluetooth device supports an enhanced communication mode; and

communicating the first information to the remote Bluetooth device.

22. (Previously Presented) A method of operating a wireless terminal, comprising:

determining whether a remote Bluetooth device supports an enhanced communication mode;

selectively interleaving first information over time for communication to the remote Bluetooth device based on whether the remote Bluetooth device supports an enhanced communication mode; and

communicating the first information to the remote Bluetooth device.

23.-26. (Canceled)

27. (Previously Presented) The wireless terminal of Claim 1, wherein the processor is further configured to convolutionally encode the second information for transmission by the cellular transceiver according to a signal processing operation, and to selectively convolutionally encode the first information according to the signal processing operation for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

28. (Previously Presented) The wireless terminal of Claim 1, wherein the processor is further configured to interleave the second information over time for transmission by the cellular transceiver according to a signal processing operation, and to selectively interleave the first information over time according to the signal processing operation for communication by the Bluetooth module based on whether the remote Bluetooth device supports an enhanced communication mode.

29. (Previously Presented) The wireless terminal of Claim 1, wherein the processor is further configured to selectively encode the first information by selectively embedding control data in the first information based on whether the remote Bluetooth device supports an enhanced communication mode.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.